

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
20 October 2005 (20.10.2005)

PCT

(10) International Publication Number  
**WO 2005/097374 A1**

(51) International Patent Classification<sup>7</sup>: **B21D 51/18**,  
B23K 37/04, 11/04

(74) Agent: VERMETTE & CO.; Box 40, Granville Square,  
Suite 230 - 200 Granville Street, Vancouver, British Colum-  
bia V6C 1S4 (CA).

(21) International Application Number:  
PCT/CA2005/000534

(81) Designated States (*unless otherwise indicated, for every  
kind of national protection available*): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,  
MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM,  
PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY,  
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,  
ZA, ZM, ZW.

(22) International Filing Date: 7 April 2005 (07.04.2005)

(25) Filing Language: English

(26) Publication Language: English

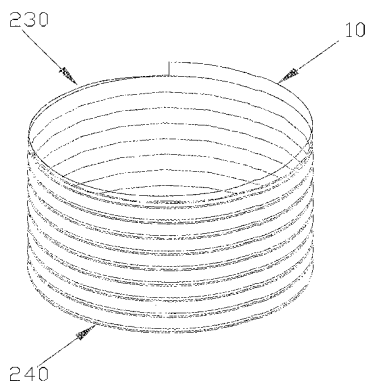
(30) Priority Data:  
60/560,981 12 April 2004 (12.04.2004) US

(71) Applicant and  
(72) Inventor: VANDERBEKEN, Mark [CA/CA]; 15525  
Cliff Avenue, White Rock, British Columbia V4B 1V8  
(CA).

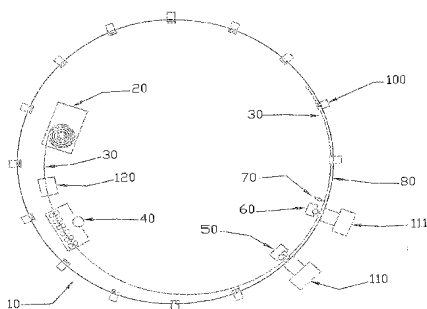
(84) Designated States (*unless otherwise indicated, for every  
kind of regional protection available*): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: METHOD FOR MANUFACTURING A CIRCULAR METAL TANK



(57) Abstract: A method for manufacturing a circular metal tank, from an elongated sheet of metal. The upper and lower longitudinal edges of the metal sheet are bent to produce a first "L" bend and a second "chair" bend, respectively. The sheet of metal is moved in a helical trajectory such that the second bend comes into proximity above the first bend. The second bend and the first bend are welded together such that the wall of the cylindrical tank is formed. Welding of the bends serves to stress relieve or anneal the bent metal, thereby preventing cracks in the metal which may result in leaks and/or compromise the structural integrity of the tank. The first and second bends additionally cooperate to form a helical roller track on the outside of the tank. The tank is supported and rotated about its longitudinal axis on a plurality of rollers that engage the roller track.



WO 2005/097374 A1



European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

— with international search report

— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.